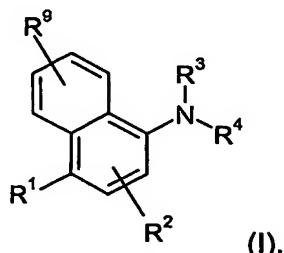


What is claimed is:

1. The present invention includes compounds of formula (I):



5 including salts, solvates, and physiologically functional derivatives thereof, wherein R<sup>1</sup> is cyano, nitro, halogen, haloalkyl, heterocyclyl, hydroxy, alkoxy, haloalkoxy, -OC(O)R<sup>6</sup>, -CO<sub>2</sub>R<sup>6</sup>, -CONHR<sup>6</sup>, -C(O)R<sup>6</sup>, -S(O)<sub>n</sub>R<sup>6</sup>, -SO<sub>2</sub>N(R<sup>6</sup>)<sub>2</sub>, -NHC(O)R<sup>8</sup>, or -NHSO<sub>2</sub>R<sup>6</sup>;

10 R<sup>2</sup> is H, cyano, nitro, halogen, haloalkyl, alkyl, alkenyl, alkynyl, hydroxy, alkoxy, haloalkoxy, -OC(O)R<sup>6</sup>, or aryl;

R<sup>3</sup> and R<sup>4</sup> each are independently -(CH<sub>2</sub>)<sub>x</sub>-R<sup>5</sup>, where x is 0 to 6, and

15 R<sup>5</sup> is selected from H, alkyl, hydroxy, haloalkyl, alkenyl, alkynyl, cycloalkyl, heterocyclyl, -C(O)OR<sup>7</sup>, or -N(R<sup>8</sup>)<sub>2</sub>;

each R<sup>6</sup> independently is H, alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclyl, aryl, aralkyl, heteroaryl, or heteroaralkyl;

each R<sup>7</sup> independently is H, alkyl, cycloalkyl, aryl;

each R<sup>8</sup> independently is H or alkyl; and

20 R<sup>9</sup> is H, cyano, nitro, halogen, haloalkyl, alkyl, alkenyl, alkynyl, hydroxy, alkoxy, haloalkoxy, -OC(O)R<sup>8</sup>, or aryl.

2. The compound of claim 1 wherein R<sup>1</sup> is cyano, nitro, or halogen.

3. The compound of claim 1 wherein R<sup>3</sup> is -(CH<sub>2</sub>)<sub>x</sub>-R<sup>5</sup>, x is 0, and R<sup>5</sup> is H, alkyl, or haloalkyl.

25 4. The compound of claim 1 wherein haloalkyl is trifluoromethyl or trifluoroethyl.

5. The compound of claim 1 wherein R<sup>3</sup> is -(CH<sub>2</sub>)<sub>x</sub>-R<sup>5</sup>, x is 1, and R<sup>5</sup> is cycloalkyl.

6. The compound of claim 1 wherein R<sup>4</sup> is -(CH<sub>2</sub>)<sub>x</sub>-R<sup>5</sup>, x is 0, and R<sup>5</sup> is alkyl, cycloalkyl, or hydroxy.

7. The compound of claim 1 wherein  $R^4$  is  $-(CH_2)_x-R^5$ ,  $x$  is 1 to 6, and  $R^5$  is alkyl, alkenyl, haloalkyl, hydroxy, cycloalkyl, heterocyclyl, heteroaryl, or  $-N(R^{10})_2$  where each  $R^{10}$  is a  $C_1-C_8$  alkyl group.

8. The compound of claim 1 selected from:

- 5  $N$ -(cyclopropylmethyl)- $N$ -(4-nitro-1-naphthyl)- $N$ -propylamine;  
 $N$ -cyclohexyl- $N$ -methyl-4-nitro-1-naphthalenamine;  
 $N$ -(4-nitro-1-naphthyl)- $N,N$ -dipropylamine;  
 $N$ -butyl- $N$ -methyl- $N$ -(4-nitro-1-naphthyl)amine;  
4-[ethyl(2-methyl-2-propenyl)amino]-1-naphthonitrile;
- 10  $N$ -butyl- $N$ -ethyl-4-nitro-1-naphthalenamine;  
4-[butyl(methyl)amino]-1-naphthonitrile;  
4-[(cyclopropylmethyl)(propyl)amino]-1-naphthonitrile;  
 $N^1$ -ethyl- $N^2$ , $N^2$ -dimethyl- $N^1$ -(4-nitro-1-naphthyl)-1,2-ethanediamine;  
4-(propylamino)-1-naphthonitrile;
- 15 4-[(3-hydroxypropyl)amino]-1-naphthonitrile;  
3-[(4-nitro-1-naphthyl)amino]propan-1-ol;  
4-[(cyclopropylmethyl)amino]-1-naphthalenecarbonitrile;  
4-[(cyclopropylmethyl)[3-(1-piperidinyl)propyl]amino]-1-naphthalene  
carbonitrile trifluoroacetate;
- 20 4-[(cyclopropylmethyl)(3-hydroxypropyl)amino]-1-naphthalenecarbonitrile;  
4-nitro- $N$ -(2,2,2-trifluoroethyl)-1-naphthalenamine;  
4-bromo- $N$ -(2,2,2-trifluoroethyl)-1-naphthalenamine;  
4-bromo- $N,N$ -bis(2,2,2-trifluoroethyl)-1-naphthalenamine;  
4-[(2,2,2-trifluoroethyl)amino]-1-naphthalenecarbonitrile;
- 25 4-[bis(2,2,2-trifluoroethyl)amino]-1-naphthalenecarbonitrile;  
4-[propyl(2,2,2-trifluoroethyl)amino]-1-naphthalenecarbonitrile;  
4-[2-propen-1-yl(2,2,2-trifluoroethyl)amino]-1-naphthalenecarbonitrile; and  
4-[(2-hydroxyethyl)(2,2,2-trifluoroethyl)amino]-1-naphthalenecarbonitrile.
9. The compound of claims 1-8 substantially as hereinbefore defined with  
30 reference to any one of the Examples.
10. A pharmaceutical composition comprising a compound according to claims 1-  
8, and a pharmaceutically acceptable carrier.
11. A compound according to claims 1-8 for use as an active therapeutic  
substance.

12. A compound according to claims 1-8 for use in the treatment or prophylaxis of conditions or disorders that respond to selective androgen receptor modulation.
13. A compound according to claims 1-8 for use in the treatment or prophylaxis of 5 osteoporosis, muscle wasting, frailty, cardiovascular disease, breast cancer, uterine cancer, prostate hyperplasia, prostate cancer, dyslipidemia, menopausal vasomotor conditions, urinary incontinence, atherosclerosis, libido enhancement, depression, uterine fibroid disease, aortic smooth muscle cell proliferation, endometriosis, or ADAM.
- 10 14. Use of a compound according to claims 1-8 in the manufacture of a medicament for use in the treatment or prophylaxis of conditions or disorders that respond to selective androgen receptor modulation.
15. Use of a compound according to any one of claims 1-8 in the manufacture of 15 a medicament for use in the treatment or prophylaxis of osteoporosis, muscle wasting, frailty, cardiovascular disease, breast cancer, uterine cancer, prostatic hyperplasia, prostate cancer, dyslipidemia, menopausal vasomotor conditions, urinary incontinence, atherosclerosis, libido enhancement, depression, uterine fibroid disease, aortic smooth muscle cell proliferation, endometriosis, or ADAM.
- 20 16. A method for the treatment or prophylaxis of conditions or disorders that respond to selective androgen receptor modulation comprising the administration of a compound according to any one of claims 1-8.
17. A method for the treatment or prophylaxis of osteoporosis, muscle wasting, 25 frailty, cardiovascular disease, breast cancer, uterine cancer, prostatic hyperplasia, prostate cancer, dyslipidemia, menopausal vasomotor conditions, urinary incontinence, atherosclerosis, libido enhancement, depression, uterine fibroid disease, aortic smooth muscle cell proliferation, endometriosis, or ADAM comprising the administration of a compound according to any one of claims 1-8.